

CLAIMS

1. Apparatus to generate automatically a mipmap chain of texture images from a portion of texture image data for use in texturing a computer graphic image comprising:

means to store temporarily the portion of texture image data;

filtering means to generate at least one lower level of mipmap data from the texture data; and

means to store the lower level of mipmap texture image for use in texturing.

2. Apparatus according to claim 1 in which the portion of texture image data is stored in a part of a main memory of a computer graphics system.

3. Apparatus according to claim 1 or 2 in which the means to store temporarily the portion of texture image data comprises a temporary buffer in the computer graphics system.

4. Apparatus according to claim 3 in which the temporary buffer comprises a tile buffer used for temporarily storing image data prior to writing it to a frame buffer.

5. Apparatus according to claim 4 in which the frame buffer comprises a portion of the main memory.

6. Apparatus according to claim 4 in which the filtering means also stores the lower level mipmap in the tile buffer prior to generation of a next lower mipmap level.

7. Apparatus according to claim 6 in which the process repeats a predetermined number of times until all desired mipmap levels have been generated.

8. A method for generating automatically a mipmap chain of texture images from a portion of texture image data for use in texturing a computer graphics image comprising the steps of:

temporarily storing a portion of texture image data;
filtering the portion of texture image data to generate at least one lower level of mipmap data; and
storing the lower level of mipmap texture image data for use in texturing.

9. A method according to claim 8 in which the step of temporarily storing the portion of texture image data comprises storing the texture image data in a temporary buffer in the computer graphics system.

10. A method according to claim 8 or 9 in which the step of filtering the texture image data comprises filtering the data from the temporary buffer and storing the thus filtered data in the temporary buffer and in a main memory.

11. A method according to claim 10 in which the filtering step is performed a predetermined number of times until all desired mipmap levels have been generated.

12. Apparatus to generate automatically a mipmap chain of texture images substantially as herein described with reference to the accompanying drawings.

13. A method to generate automatically a mipmap chain of texture images substantially as herein described.